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THE TREATMENT OF CONVULSIONS*

KENNETH M. CORRIN, M. D.**
Wilmington, Del.

The successful treatment of any disorder depends largely upon the physician's knowledge of cause and effect. Lack of a scientific understanding of the mechanism of the convulsion is the chief obstruction to constructive progress in formulating definite treatment and being able to give a more satisfying and accurate prognosis. The study and treatment of convulsions, however, is being placed upon a more scientific basis each year, although the exact mechanism of the convulsion is not yet understood. There are a few principles governing this reaction which are generally agreed upon by physicians and scientists interested in the subject. They may be listed briefly as follows:

(a) In consideration of the therapeutic use of convulsions in the treatment of the depressions and certain of the neuroses, as well as in experimental work, it is considered that the convulsion is a universal reaction in the higher biological world and in all probability a protective mechanism. Convulsions are no more inherited than attacks of syncope (fainting). There is always an abnormal cause or condition producing the convulsion.

(b) The only function of a muscle is that of contraction. Every muscle contraction must be motivated by a proper physiological stimulus through a nerve. The convulsion is the result of the stimulation of nerve tissue.

(c) In consideration of the character of the generalized muscular contractions in the convulsion the most likely type of stimulation causing the convulsion is a pressure type of stimulus.

(d) The most logical site of pressure stimulus is the area of the brain stem at the level of the foramen magnum. In this area is located most of the nerve elements of the body and especially the nuclei for respiratory and cardiac control, as well as the fibres to the somatic areas for motor control and sensation.

(e) It is well known that the cortex is relatively insensitive to pressure stimulation, whereas the brain stem is extremely sensitive to the slightest pressure or related stimuli.

(f) In consideration of the fact that the brain molds itself to its non-expanding container and is made up of a rich network of capillaries which responds to the slightest change in rate, force and volume of blood flow, it would seem logical that a sudden increase of blood into the brain, faster than it can pass through the capillary bed, would produce expansion of the brain outward with the forcing of the brain stem downward into the constricting foramen magnum, producing pressure stimulation at this site with the resulting mechanism developing which is designated as a convulsion. Severe hemorrhage, syncope, vasomotor instability and associated disorders producing low blood pressure tend to decrease cerebrospinal fluid pressure thus removing the water bed action about the base of the brain, allowing the brain stem to settle into the foramen magnum setting up this same pressure stimulus.

(g) During the convulsion there is great increase in blood pressure and intracranial pressure, with cardiac arrest accompanying the respiratory arrest.

(h) A sedative such as potassium bromide, dehydration and lowering of the blood pressure with amyl nitrite will prevent convulsions.

(i) Increasing the fluid intake intensifies experimentally produced convulsions.

(j) Most of the agents producing convulsions are either strong circulatory stimulants or produce vascular pathology of destructive nature. The most common exciting agents are drugs like strychnine, camphor monobromate and metrazol, fevers as scarlet fever, infec-

*Read before the Medical Society of Delaware, Wilmington, October 8, 1941.
**Associate in Neuro-Psychiatry, Wilmington General Hospital.

tions as meningitis, sudden increase of fluids into the system, electrical shock to the brain, reflex conditions and like agents. The most frequent disorders acting over a long time and producing pathology in the form of obliterative endarteritis or space-taking effects are chronic alcoholism, syphilis, uremia or eclampsia, the encephalopathies as lead or metallic poisoning, cerebral arteriosclerosis, brain abscesses and tumors and like conditions.

(k) The convulsion in itself is not a disease but a syndrome, a reaction of the neurovascular mechanism which may be caused by many different agents. Treatment of the acute convulsion should be centered on the neurovascular mechanism.

The treatment of convulsions upon the character and stage of the disorder. Where convulsions suddenly develop in a person the most important factor is immediate sedation sufficient to control the convulsions. Sodium amytal by vein and potassium bromide or phenobarbital by mouth are quick acting sedatives. Saline catharsis with moderate dehydration should be instituted. Cold wet sheet packs, loosely applied, with ice caps to the head and heart, are helpful in preventing further attacks, especially in children. This treatment will usually stop the convulsions and give the physician time to search for the exciting cause or causes. Where thorough clinical and laboratory studies have failed to reveal a cause, the most likely condition is a disturbance of the intracranial circulatory mechanism producing what has been known for years as epilepsy.

The successful treatment of repeated severe convulsions depends largely upon the cooperation of the patient. Probably the most important factor is *general sedation* sufficient to quiet the hyperexciteable neurovascular mechanism and prevent attacks, yet not in large enough amounts to do harm or disturb the normal physiology of the body. Phenobarbital in ¾ to 1½ grain dosage, twice a day, is usually sufficient, but enough sedation should be given to prevent attacks. At times the patient may anticipate attacks, as before going to an exciting movie or in some instances at the time of the menstrual period. Potassium bromide in 20 to 30 grain doses 1 to 2 hours before the anticipated occasion, or twice a day over several days, will be helpful. Where an aura or warning is experienced before an attack the crushing and inhaling of a pearl of amyl nitrite will quickly drop the blood pressure and often prevent an attack.

The next most important factor in the treatment of convulsions is *decrease of fluid intake* to approximately 70% of normal. The average intake for a moderately active adult is about 2000 cc. in 24 hours. A *light diet* containing easily digested foods is essential, with partial limitation or relative elimination of sweets, pastries and highly salted and seasoned foods. Proper rest with avoidance of overwork and sufficient sleep at night is important. *Emotional tension,* as exciting plays or movies, games, anger and associated factors should be avoided where possible. *Elimination* is of more importance in some individuals than in others. A bottle of citrate of magnesia or other saline cathartic, once a week, is a good practice in one who is subject to occasional attacks. *Thyroid* and *pituitary extracts* are helpful in selected cases.

In status epilepticus spinal drainage to drain away all excess fluid will usually give great relief. Precautions should be taken, however, that the patient is lying on his side with head lowered as there is always the possibility that one may be dealing with brain tumor, the drainage of the fluid allowing the brain to settle firmly into the foramen magnum with respiratory and circulatory difficulties. Intravenous injection of sodium amytal is also helpful in relieving status epilepticus, especially where the blood pressure is elevated. Paraldehyde in chilled orange juice is of value if the patient can swallow. Removal of 500 to 800 cc. of blood is beneficial in plethoric individuals and is often helpful in chronic states where done periodically.

Dilantin is beneficial in selected cases. It may often be used in combination with phenobarbital, dilantin in 1 or 2 capsules being given after breakfast and lunch, where phenobarbital tends to make the patient drowsy during the day, and phenobarbital in ¾ to 1½ grains or more after the evening meal and at bedtime. Any change from one to the other should be made gradually. Toxic mani-

festations of dilantin are hypertrophy of the gums, erythema of the skin, gastrointestinal disturbances, delirium and incoordination. Vitamin C in the form of lemon juice and vitamin D in viosterol tend to prevent these conditions. In routine and institutional work dilantin is considered inferior to phenobarbital.

The electroencephalogram is a definite aid in diagnosis and prognosis. The character of the wave indicates whether or not the patient is of a convulsive type, whether the attacks are grand mal or petit mal in character or of the normal brain wave type. In this way pyknolepsy and narcolepsy may also be differentiated. In border line cases, nocturnal epilepsy, and court cases this diagnostic aid is of great value. The type and amplitude of the wave is also of value in prognosis.

DISCUSSION

DR. L. B. FLINN (Wilmington): I feel that Dr. Corrin should be congratulated not only for the experimental work which he has done and presented so beautifully with his photographs, but also for bringing up what might seem a very trite subject—convulsions. It is something that among many other conditions, for instance, cerebro-vascular accidents, has been taken more or less as a matter of course, I feel, by the profession at large. Now that we have modern means of conveyance and communication, and with modern advances in science, convulsions should have more attention than what has heretofore been probably the most accepted form of treatment by the doctor. That is, when he receives a call to a patient in convulsions, he takes his time and finishes his dessert, sips his cup of coffee, and arrives just after the convulsions are over. It is much simpler, but it doesn't get us very far in prophylaxis.

The hypothesis presented by Dr. Corrin has laid considerable stress upon not only increased intracranial pressure but also increased peripheral blood pressure as a cause precipitating the convulsive seizure. The illustrations he has pointed out are evidences to support that. I think largely that that is the main issue. I wonder, however, as far as the actual cell stimulus is concerned, if it is the pressure that is the cause or whether perhaps it is a relative anoxemia resulting from the increased pressure change.

There are one or two points in this connection which I would like to mention and ask Dr. Corrin how he feels about them. First, convulsions associated with acute infectious diseases are much more common in infants than in adults. And in infants it is much more difficult to make sudden changes of increased intracranial pressure than in adults, naturally, because of the elasticity of the skull and the open fontanels. Here I think we would have to feel that one reason at least for the increased frequency of convulsions in infants perhaps may be that the nervous tissue is more sensitive, has a lower threshold.

Another point comes up, and it was raised by some Philadelphia workers, working in the Postgraduate Hospital, I think, Webster and Weinberger, reporting in the Journal of Neurology and Psychiatry of last year. In regard to cerebral tumors they pointed out, as is generally accepted, that convulsions, and particularly chronic convulsions, and cerebellar tumors and other tumors below the tentorium are quite rare. They examined about 158 cases and found that they were not so rare. Then they made a rather exhaustive analytical study of the literature on other evidences, which I won't go into, but two or three points may be of interest in this connection.

One is that in cerebellar tumors intracranial pressure rises more rapidly probably than in any other type of tumor, and there we would expect, therefore, more pressure on the medulla and in the area which Dr. Corrin has pointed out to us, than the other type of tumors. Yet we have fewer convulsions in this group of cases.

They went on to show that some of the chronic convulsions that do arise in these patients—and they went to some considerable length to explain it—are caused by a relative ischemia of the cortex, due to the pressure, first affecting the more sensitive vessels in the cortex, and later affecting the medulla vessels which are larger and more difficult to compress. Wolf has given us considerable evidence that ischemia of the cortical vessels in the brain precipitates symptoms much more promptly with the same amount of pressure

change throughout the brain than ischemia resulting from the larger vessels in the midbrain and below. In other words, with the same generalized pressure the smaller vessels in the cortex become ischemic. They suggest that the convulsion may be precipitated by local anoxemia and a stimulating effect thrown out from that source to overstimulate the entire nervous system.

Similarly, I suppose that a muscle cramp is due to overstimulation rather than a normal contraction. In a convulsion we have an overstimulation of the whole brain system instead of just an impulse going to one focus.

Then the opposite condition sometimes is of interest. For instance, in Stokes-Adams disease the heart goes into asystole for ten or fifteen seconds, and we have syncope; if the asystole lasts twenty to forty seconds generalized convulsions occur. Here certainly there is no increased blood pressure, and it is difficult to see how we will have any increased intracranial pressure.

Again, in cases of over-insulin dosage or in case of hyperinsulinism there is probably no increased intracranial pressure. There may be a relative change in the pressure. There may be a slow exit of blood from the brain; but there also is probably an anoxemia of the cerebral cells accentuated by the low blood sugar content of what blood is circulating at the time. There have been quite a good many investigations, one recently by Winkleman and Moore in Philadelphia, on the effect of insulin, particularly in the treatment of dementia praecox and other mental disorders, showing that in the fatal cases there are almost always convulsions and damage done to the ganglion cells, vacuoles. The general feeling is that the cells have been damaged by the insulin rather than being secondary to vascular changes brought on by the overdosage of insulin.

I mention these various points to raise the question as to whether the cause of the convulsions may not always be due per se to the increased pressure. It may not always be a pressure stimulus, but the pressure change may cause and may be the major cause of local or sometimes general anoxemia in the cerebrum, in the cortex, or the midbrain or medulla, to bring on the convulsions. The point is not entirely theoretical but may lead to proper therapy as more investigations go on, and as we know and think more about this ever present condition.

I hope Dr. Corrin will continue his investigations, and I will be glad to have his reaction to these suggestions. Thank you.

DR. CORRIN: Dr. Flinn mentioned one or two points that I might discuss here. I spoke in general of intracranial pressure forcing the brain stem down into the foramen magnum as being the chief mechanism. We know that in certain instances such as hemorrhage, insulin shock, or aortic regurgitation, conditions where there is a great deal of loss of blood or low blood pressure or low intracranial pressure, we sometimes get convulsions, and here the thought would probably be that there is a loss of the waterbed action about the brain stem allowing the brain and the delicate sensitive nervous tissues of the brain stem to settle into the foramen magnum.

There is so much we don't know about that problem and it is such a wide field, that it is rather difficult to say very much as to exactly what these conditions are, but the chief factor apparently is in the disordered intracranial circulation. That is the chief factor in our convulsions, apparently.

PURPURA HEMORRHAGICA*
A Case Report

ALBERT G. GLUCKMAN, M. D.
Wilmington, Del.

Before I present this case of purpura hemorrhagica, I should like to quote a classification of the purpuras, and show where this case fits into the classification. Since the etiology of purpura hemorrhagica is still unknown, no clearly defined classification is possible. From the various ones I could find in the literature, I think the one given by Wintrobe, of Johns Hopkins, will lend itself best to the case at hand.

I. Thrombocytopenic Purpura.
   1. Essential or Primary (Werlhof's Disease).
   2. Symptomatic or Secondary:
      a. In blood diseases (aplastic anemia, leukemia, pernicious anemia).
      b. Infections (sepsis, subacute bacterial endocarditis, typhoid, tuberculosis, etc.).
      c. Intoxications (benzol, arsphenamine, snake venom, etc.).
      d. Radiation (x-ray, radium, etc.).
      e. Diseases associated with splenomegaly

*Read before the Staff, St. Francis Hospital, Wilmington, October 17, 1941.

(hemolytic icterus, Gaucher's disease, etc.).
f. Tumors, metastases, sclerosis of bone marrow.
g. Anaphylaxis.
h. Avitaminosis.

II. Nonthrombocytopenic Purpura.
1. Essential or Primary:
a. Anaphylactoid purpura (purpuras of Schlonlein and Henoch, and erythemas of Osler).
b. Miscellaneous group (purpura simplex, purpura fulminans, purpura senilis, purpura cachectica, mechanical purpura, familial and hereditary purpura).
2. Symptomatic or Secondary:
a. Various chronic diseases (chronic nephritis, cardiac or hepatic disease, etc.).
b. Infections (scarlet fever, typhoid, etc.).
c. Intoxications (benzol, arsphenamine, iodine, snake venom, etc.).
d. Avitaminosis (scurvy).

CASE HISTORY

On September 29, 1941, a white female, age 18, and in apparent good health presented herself at my office with the history that for the past two days she had bruises on her legs, back, abdomen, etc., which did not come from injury. There was no itching. Otherwise she felt perfectly well but was perplexed at the number and extent of the bruises.

Her history started a week previous with a cold in the head, similar to previous colds she has had. For this she took brown mixture and two "cold pills" of unknown nature. Two days later she noticed the purpuric lesions. She has had no other hemorrhagic phenomena except bleeding from the gums. There has been no increase in the menses (on October 21, 1941, the period was much increased in flow, but not in duration). There were no nosebleeds. Aside from this episode her medical history is apparently unimportant. She has had repeated colds in the head, and had her tonsils out at five years of age. She has had two types of pains, neither severe: One in the left upper quadrant—which made me suspect an enlarged spleen; and one in the legs, which were vague and probably of the "growing pain" variety. A careful effort to obtain a history of her exposure to chemicals, radiation, etc.—all failed. There was no history of a similar episode in any member of her family. No history of allergy could be obtained. Her maternal grandfather died of pemphigus.

Physical Examination was entirely normal except for the purpura, some of which was fading, but some new lesions were appearing. The spleen was not palpable.

Blood Studies

9/29/41
R.B.C.—4,600,000
Hb.—87%
W.B.C.—11,000
Differential—normal smear
Blood platelets—108,000
Bleeding time—at the end of 15 minutes there was no evidence of lessening of this flow.
Cuff test—positive
Clotting time—normal
Clot—non-retractile
Coagulation time—normal

Clinical Course

The patient was put to bed for two weeks, at the end of which time all lesions disappeared, and no new ones appeared. This made a total of three weeks from the onset. After three weeks she was allowed up, when her blood count was as follows:

R.B.C.—4,400,000
Hb.—85%
W.B.C.—9,000
Differential—normal
Platelets—80,400

At this time, when she put on her rubber girdle, a line of purpuric spots appeared along the top, but disappeared on the removal of the girdle. Menses: increased flow, same duration.

Diagnosis

The diagnosis obviously is acute thrombocytopenic purpura, with spontaneous remission.

Prognosis

Whether she will have intermittent exacerbations it is hard to say. Her platelet level is not normal yet. We still must consider the possibility of splenectomy. To this end we have a donor available.

ESSENTIAL THROMBOCYTOPENIC PURPURA HEMORRHAGICA

Definition

Condition of unknown etiology characterized by petechiae or ecchymosis in the skin, hemorrhage from the mucous membranes, a reduced platelet count, prolonged bleeding time, non-retractile clot, and normal coagulation time. The skin lesions are not associated with swelling or inflammation.

Etiology

This condition occurs most frequently in children and young adults: 75% are said to occur before 30 years of age, and twice as often in females than males.

Hereditary and familial examples of the disease have been described, but whether or not they should be classed with the primary thrombocytopenic variety is still moot.

The onset has sometimes been preceded by infection. Its causation is unknown, and the physiologic disturbance remains a mystery. The two phenomena, reduction of blood platelets and the striking improvement which follows splenectomy, are probably the most thought-provoking ones in connection with this disease, and a number of theories have been offered to explain them. At this time, however, there is still little evidence to support the theories. It has been proposed that the megakaryocytes are abnormal in some way; they may be in normal or in excessive numbers in the bone marrow, but the granulations which are normally found in the cells are absent. Some believe that the spleen exerts an inhibitory influence on the formation of platelets. One suggests that platelets are destroyed by the spleen more rapidly than normal. Others view as a possibility the presence of some abnormality in the functioning of the reticulo-endothelial system as a whole, since it has been indicated that the permeability of the capillaries may depend on the integrity of this system. It has been concluded that two main factors are concerned in the production of hemorrhages; namely, toxic action on the endothelium of the vessels, and removal of platelets from the circulation. Perhaps it is possible that abnormal capillary permeability to blood may be the initial disorder, and that the platelets are used up in an attempt to defend the weakened areas.

Symptomatology

Acute and chronic forms of this illness are seen, the chronic being 10 times more common than the acute form. The onset may vary from uncontrollable hemorrhages to the mild form of purpura we have seen in this case. The changes in the blood depend upon the amount of blood lost, and the platelets are markedly reduced in number in the active stages of the disease, and may even remain below normal when hemorrhage is not occurring. Bleeding usually begins when the platelets are reduced to 60,000 per c.m.m. or less. Bleeding time is greatly prolonged and although the blood clot gels, it does not retract. Coagulation time is normal. Capillary resistance test is positive.

Diagnosis

I will not delve into the differential diagnosis of the various blood diseases. If the blood changes which have been described are borne in mind, and the history and physical examination carefully done, it will be possible to discover or rule out some of the causes of secondary thrombocytopenic purpura. Some of the diseases which could be confused in the differential diagnosis are aplastic anemia, acute leukemia, pernicious anemia, avitaminosis.

Prognosis

Prognosis in this disease is difficult to state. Many patients have repeated attacks without ever having any serious complication; others have some serious localization of hemorrhage in the brain or elsewhere in their first attack. Many have one attack and never have another, or certainly not for many years. This often makes the question of treatment difficult to decide upon.

Treatment

There is no specific treatment of this disease. Rest in bed during the acute stages, with good nursing care to prevent skin injury and secondary infection, and a well-balanced diet are essential. Most patients will improve on expectant treatment alone. Liver and iron are of value when anemia is present. Drugs such as calcium chloride and blood coagulants seem to be of no benefit. Irradiation of the spleen has been reported favorably and unfavorably. Blood transfusion is of temporary value. Whole blood should be used because citrate and filtration of the blood remove at least some of the platelets from the blood. Small transfusions must be repeated every two or three days to supply platelets, because the life of a platelet is very brief. If large amounts of blood are given there is apt to be more hemorrhage.

There is no question that splenectomy is still the treatment of choice in either the acute or the recurring type following this operation. In most cases bleeding will cease, the eruptions disappear, bleeding time and clot retractivity return to normal, and the cuff test become negative. The operative mortality according to recent statistics is about 7% in chronic cases, and about 15% in acute cases. Operation in acute cases may actually be a life-saving measure. Postoperative causes of death were recorded as shock, brain hemorrhages, postoperative complications, and incorrect diagnosis. Recurrences of bleeding after splenectomy have been ascribed to the development of accessory spleens, and sometimes unrelieved foci of infection. Since it is admitted that splenectomy does not remove the cause, one surgeon suggests ligation of the splenic artery as offering less risk and equally good results. At autopsy no characteristic findings have been observed.

EMERGENCY MEDICAL SERVICE FOR CIVILIAN DEFENSE

The Medical Division of the United States Office of Civilian Defense, Washington, D. C., has issued its first bulletin, entitled "Emergency Medical Service for Civilian Defense." That physicians may be advised of this work, the bulletin is reprinted.

MEDICAL PROVISIONS FOR CIVILIAN DEFENSE

The activities of the U. S. Office of Civilian Defense are concerned primarily with the protection of lives and property in the event of enemy action. To its Medical Division is entrusted the responsibility for the preparation of plans for Civilian Defense designed to prevent or alleviate the medical and public health hazards to which the civilian population may be exposed.

This bulletin is the first of a series of recommendations to State and Local Directors of Civilian Defense concerning the augmentation of medical facilities in their area. It presents a simple basic plan for the organization of Emergency Medical Field Units related to hospitals, which can be adapted to the needs of any community. It directs attention to the possible future requirements for expansion of hospital facilities both within a community and outside its boundaries. To this end, it recommends the immediate preparation of a local inventory, a report of which should be filed in duplicate with the Area Office of Civilian Defense. It also recommends that steps be initiated in each local area for the rapid expansion of nursing facilities through intensive training of adequate numbers of nursing auxiliaries.

To those who do not as yet appreciate the need for action, I should like to quote from a similar official bulletin issued in England in 1938 just prior to the beginning of hostilities, which describes measures for safeguarding the civilian population:

> "The need for [these measures] is not related to any belief that war is imminent. It arises from the fact that the risk of attack from the air, however remote it may be, is a risk that cannot be ignored, and because preparations to minimize the consequences of attack from the air cannot be improvised on the spur of the moment but must be made, if they are to be effective, in time of peace."

Whether or not we regard danger to the lives and the property of our people as imminent, I would urge that immediate steps be taken to carry out these recommendations of the Office of Civilian Defense in every State along our seaboards and in industrial areas in the interior.

F. H. LAGUARDIA,
U. S. Director Civilian Defense.

Washington, D. C.
July 30, 1941.

EMERGENCY MEDICAL SERVICE FOR CIVILIAN DEFENSE

Current developments in techniques of warfare leading to the possibility of unheralded bombing of civilian populations as well as potential hazards from sabotage, make imperative the preparation of facilities for providing medical service to casualties that may result from such incidents. The need for these emergency facilities may not arise, but their organization must be a fundamental part of our Civilian Defense program. It is the purpose of this bulletin to outline the essentials of an Emergency Medical Service and to describe a type of organization by which these essentials may be achieved.

The Medical Division of the Office of Civilian Defense is charged with the preparation of plans for emergency medical service and equipment. It also maintains liaison with other Federal agencies concerned with public health and medical care. In addition, an officer of the United States Public Health Service is designated to serve as medical liaison to Civilian Defense Area Office.*

Because of geographical and administrative diversity in various parts of the country, general plans are presented as recommendations to State and local defense councils for adaptation to meet the needs of the different areas. The general adoption of a common pattern in organization and equipment for civilian defense is highly desirable so that adjacent communities may pool or exchange emergency resources in time of need.

Local administrative areas for civilian defense will frequently extend beyond municipal or other political boundaries. Such administrative civilian defense areas may be defined by State Defense Councils. It is important that the Emergency Medical Service be integrated at all administrative levels with welfare, police, and other emergency services.

I. LOCAL CHIEF OF EMERGENCY MEDICAL SERVICE

An Emergency Medical Service should be organized as a section of the local defense organization in each area under a director responsible to the local Director of Civilian Defense. It is recommended that the local Chief of Emergency Medical Service be a physician of broad experience and administrative capacity, such as a health

*Delaware is in the Second Civilian Defense Area with headquarters at 111 Eighth Avenue, New York City.

officer or an experienced hospital administrator. It should be his first duty to make an inventory of the community's medical resources and facilities, and to prepare local plans, develop an organization, and provide for the training of personnel to carry out the functions of the Emergency Medical Service outlined below.

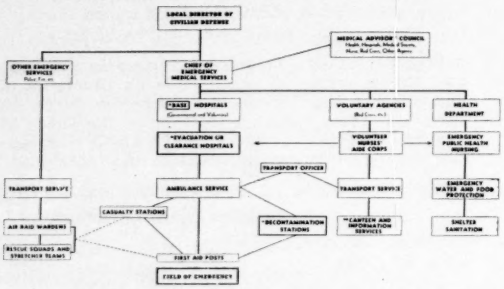

Fig. 1. Local director of civilian defense. The immediate command of all local civilian defense forces, including the medical, and the orders for emergency mobilization of these forces should be the responsibility of the person officially designated as Director of Civilian Defense for the area. He must possess full information concerning emergency medical facilities available in the area.

*Functions projected for future organization.

**In some communities Canteen, Information, Evacuation and Rehousing Services will be the responsibility of the Welfare Department.

II. LOCAL MEDICAL ADVISORY COUNCIL ON CIVILIAN DEFENSE

The local Chief of Emergency Medical Service should be Chairman of a Medical Advisory Council. This Council might well include the local health officer, an experienced hospital administrator, a physician recommended by the local medical society because of his technical experience and executive ability, a registered nurse, and a representative of the American National Red Cross and other voluntary agencies.

III. EMERGENCY MEDICAL FIELD UNITS

In States on both seaboards and in vulnerable industrial areas in the interiors, general hospitals, both voluntary and governmental, including Veterans' Administration Facilities and the Marine Hospitals of the United States Public Health Service, should organize Emergency Medical Field Units and assemble basic equipment. An Emergency Medical Field Unit should consist of two or more squads, and a physician should be appointed to command the entire unit. Squad leaders, in turn, should be designated. The size of the Emergency Field Unit should be in proportion to the bed capacity of the parent hospital. All members of Field Units should be instructed in first aid,* including care of burns, prevention of shock, control of hemorrhage, emergency treatment of fractures and wounds, and in the technique of decontamination.

A. *Personnel.*—Small Squads: In hospitals of less than 200 beds, it is recommended that the Emergency Field Unit consist of two squads, one for each 12-hour shift of the day. Each squad should be composed of two physicians, two or more nurses, and two or more orderlies or nurses' aides, and be capable of functioning, if necessary, as two separate teams. At least one unit of this size is advisable for a population up to 25,000.

*Advanced First Aid course prepared by the Office of Civilian Defense in collaboration with the American National Red Cross.

Large Squads: In hospitals of more than 200 beds the Emergency Field Unit should consist of two squads of four doctors, four or more nurses, and four or more orderlies or nurses' aides, one of the physicians in each squad to act as squad leader. Each of the squads should be on first call during a 12-hour period of the day. The personnel and equipment of a squad should be divisible into four teams, capable of functioning if necessary at separate sites of disaster. At least one unit of this size or two units with small squads are advisable for populations up to 50,000.

In hospitals of more than 350 beds the Emergency Field Unit should consist of four or more large squads, each headed by a squad leader and capable of functioning, if necessary, as multiple teams. In these large hospitals at least two squads should be on call during each 12-hour period of the day, alternating on first call on alternate days. An Emergency Field Unit of four large squads or two Units of two large squads each, are advisable for a population of 100,000. In large cities, the desirable minimum would be four large squads (16 physicians and assistants) per 100,000.

It will be advisable to organize physicians and nurses engaged in private practice in the area into reserve Emergency Field Units related to hospitals. In areas with small hospitals whose resident staffs cannot be depleted, the primary Emergency Unit of a hospital may be made up in whole or in part of practitioners from the community.

B. *Transportation.*—A hospital ambulance, station wagon, small truck, or passenger vehicle will be adequate to transport the personnel of a squad and their equipment to the site designated by the local Director of Civilian Defense for the establishment of a Casualty Station. On return trips to the hospital with casualties such vehicle will be available for transportation of additional squads and equipment if desired. Hospitals which do not maintain an ambulance service will find it necessary to provide for transportation, utilizing private or municipal ambulance services, small vehicles of the police, fire, or other municipal departments, station wagons, or passenger cars. Special racks (see separate memorandum of the Medical Division of the Office of Civilian Defense) can be installed in private ambulances and in station wagons and small trucks so that they may be utilized in an emergency for the transportation of four or more stretcher patients at a time.

Private vehicles recruited for ambulance purposes by the American National Red Cross or other agency should be assigned to a hospital or to a designated parking center under the control of a transport officer.

C. *Medical and Surgical Equipment.*—The medical and surgical equipment for a squad should consist of a working supply for each physician's team and a reserve supply of sterile dressings and equipment in drums or packs from which the working supply of the teams may be replenished. The working supply of each team is best carried in a portable bag, box, or haversack provided with suitable compartments. A list suggesting minimum equipment will be available in a separate memorandum (Bulletin No. 2).

The provision of working supplies in a separate container for each physician will permit the squad of a Casualty Station to split off teams of one physician and assistants who can be dispatched to set up subsidiary First Aid Posts at other sites.

D. *Casualty Stations and First Aid Posts.*—Upon arrival at the site of a disaster, the squads of the Emergency Medical Units which have responded to the appropriate alarm will set up Casualty Stations at the sites designated by the local Director of Civilian Defense. The location of a Casualty Station should provide safety, shelter, and accessibility. Stretchers, cots and blankets will have arrived in a truck carrying the Rescue Squad of the police, fire, or other municipal department. Until released by authority of the local Director of Civilian Defense, the physicians and nurses of the Emergency Medical Unit should remain at their station, to which the injured will be directed or transported on stretchers by the Rescue Squads and volunteers enlisted by them for this purpose. The work of the Casualty Station is to be limited to emergency first aid procedures—the relief of pain, prevention of shock, control of hemorrhage, care of burns, application of simple splints and surgical dressings and, not least, the preservation of morale by the establishment of confidence. The seriously injured will be evacuated as rapidly as possible by ambulance or other vehicle to a hospital. Those with minor injuries will go to their homes or to temporary shelters.

If necessary, the squad leader in charge of a Casualty Station may split off one or more teams of one physician and assistants, dispatching them to set up subsidiary First Aid Posts at other sites.

It will be advisable for the local Chief of Emergency Medical Service to prepare a spot map of the area to indicate all out-patient clinics, health centers and their substations, and all police and fire stations or other sites which could serve in an emergency as Casualty Stations or First Aid Posts. He should also maintain an inventory of available transportation.

E. *Decontamination Stations.*—A subsequent bulletin will deal with the structural requirements of Decontamination Stations and with details concerning the care of casualties from chemical agents.

F. *Rescue Squads and Stretcher Teams.**—Casualties will be conducted on foot or transported on stretchers to the nearest Casualty Station or First Aid Post by Rescue Squads of police, fire, or other municipal department. These Rescue Squads may be assisted by Air Raid Wardens and by volunteers enlisted at the time. Police and fire reserves should be well trained in first aid and stretcher bearing and organized into Rescue Squads of four or eight, headed by a squad leader. By the addition of volunteers, a Rescue Squad is capable of being multiplied into as many stretcher teams as there are members, each trained member becoming the leader of a team.

Provision should be made for the storage of standard stretchers, collapsible cots, and blankets in designated locations, such as police and fire stations, hospitals, health centers, or other suitable place. The number of standard stretchers stored in each police and fire station should be equal to the number of members of the station's Rescue Squads.

It will be advisable to have three times as many collapsible cots as stretchers and two blankets for every stretcher and cot. This equipment should be transported by the truck carrying the Rescue Squad to the site of the Casualty Station or First Aid Post.

G. *Records.*—Identification tags should be affixed to the injured by the Rescue Squad or else immediately upon arrival at the Casualty Station or First Aid Post. A duplicate record should be kept in a book which should be standard equipment of each medical emergency team. The record should include the name or other identification, address, person to be notified, diagnosis, first aid administered, morphine if given, and disposition. A form approved by the Medical Division of the Office of Civilian Defense will be found in a supplementary memorandum on equipment. One nurse or nurses' aide should be assigned the responsibility for these records. The forehead of tourniquet cases and of patients urgently requiring priority attention should be marked *TK* or *U*, respectively, with a red crayon skin pencil, or lipstick.

H. *Drills.*—It is recommended that drills be called at each hospital once a month by the Chief of the professional staff. A record of each drill should be kept by him, which will show the time required for complete mobilization of a squad at the designated point of departure and the condition of equipment and transportation.

It is also recommended that field drills be called unexpectedly by the local Director of Civilian Defense at least every 3 months for each hospital. Each field drill might appropriately include one or more Rescue Squads of police, fire, or other municipal department, who will assist the Emergency Medical Squads in setting up Casualty Stations at designated sites. The official in command at the drills should inspect the clothing, equipment, and transportation of all participating units and render a report to the Chief of Emergency Medical Service and to the local Director of Civilian Defense upon the promptness and efficiency of each unit. The larger field drills might include the Canteen and other Emergency Relief Services of the Welfare Department or of the local chapter of the American Red Cross or other local agency.

IV. BASE AND EVACUATION OR CLEARANCE HOSPITALS

In order to prepare for the release of hospital beds within the area for large numbers of casualties, the Chief of Emergency Medical Service should make an inventory of hospitals, convalescent homes, and other institutions within a radius of 50 or more miles, to which maternity services, children's wards, certain categories of the hospitalized sick, and convalescents could be transported. Provision should also be made for the assembly and storage of an adequate supply of hospital cots, mattresses, blankets, and other equipment which may be required to provide for emergency increase in bed capacity of voluntary and governmental hospitals. In the event of actual destruction of hospitals, it may become necessary to consider evacuating casualties to Base Hospitals and transforming hospitals near the scene into Evacuation or Casualty Clearance Hospitals.

Upon receiving the first emergency call, the hospital should order all members of its visiting staff by telephone or police radio call to report

*Rescue Squads consist of auxiliaries of the police or fire department, who are trained and equipped for clearance and demolition work. Although their function is to extricate the injured, they have also had training in first aid and in stretcher bearing so that each member can serve as the leader of a Stretcher Team. Their first aid services at the time of the disaster should be restricted solely to most urgent needs such as the arrest of profuse bleeding or the application of a leg splint. Their primary object should be to remove the injured as soon as possible from the scene of danger with the aid of Voluntary Stretcher Teams and get them to a First Aid Post or Casualty Station.

to the hospital and stand by for the care of the injured received from the Casualty Stations and First Aid Posts.

V. AUGMENTATION OF NURSING SERVICES

In the face of the need for rapid expansion of nursing services for civilian defense, the number of available nurses is being depleted because of the requirements of the military forces and the public health and industrial hygiene services. An attempt is being made to compensate for this deficiency by the training of subsidiary hospital workers through the NYA, WPA, and other programs. The Office of Civilian Defense in collaboration with the American National Red Cross has revised the instruction curriculum for Volunteer Nurses' Aides, so as to provide for a period of intensive practical instruction in hospitals under the direction of a special instructor in charge of the training and use of Volunteer Nurses' Aides. Upon completion of this practical training, Volunteer Nurses' Aides will become eligible to assist nurses in wards and out-patient clinics of hospitals, or in visiting nurse, public health industrial hygiene, and school health services. Volunteer Nurses' Aides are intended to supplement the work of the nurse, so that she may be able to serve a greater number of patients. It is recommended that the local Chief of Emergency Medical Service in collaboration with hospital executives and principals of schools of nursing reorganize and intensify the training and the use of Volunteer Nurses' Aides in appropriate hospitals in accordance with the new schedule of the Office of Civilian Defense and the American National Red Cross.

VI. FIRST AID

First aid instruction should be provided for as large a part of the general population as possible. The local Chief of Emergency Medical Service should, in collaboration with the local chapter of the American National Red Cross, provide training in first aid for at least 5 per cent of the personnel of all municipal departments and large business and industrial establishments. Upon completion of training, this 5 per cent should constitute the first aid corps of their municipal department, business, or factory group. The leaders of these corps should be encouraged to take the Instructor's Course of the American National Red Cross so that, when qualified, their services might be utilized for the extension of first aid instruction to all employees and to the general population of the community.

The First Aid Course for Civilian Defense prepared by the American National Red Cross in collaboration with the Office of Civilian Defense is recommended for first aid training. Instructors qualified by the Red Cross may give this training under the direction of the local chapter of the American Red Cross, the local health department, or any other voluntary or governmental agency.

An intensive course of practical training (five 2-hour lessons) has been prepared by the Medical Division of the Office of Civilian Defense and the American National Red Cross as supplementary instruction for members of Emergency Medical Field Units and for nursing auxiliaries and members of other Civilian Defense Units (police officers, firemen, and volunteer auxiliaries) who have had previous instruction in first aid. It is designed as a refresher course for the purpose of reviewing and practicing those first aid procedures which are most important in Civilian Defense.

What Price Public Safety?

Now to the disgraceful record must be added one more instance of disregard for the public safety. On April 18, 1941, as we reported, occurred the strike of maids, orderlies, and employees in the nurses' home, the engineering division, and the garages of the West Penn Hospital. A serious situation was created affecting the lives and health of all the patients.

In Kansas City, on September 17, a dramatic power strike blacked out a city of 400,000 inhabitants, plunging its hospitals in darkness for the better part of a whole night and paralyzing its utilities.

This seems to us to be recklessness and irresponsibility of an order that no cause can justify and that must, in the end, utterly alienate public sympathy from labor's just grounds for complaint. There is something peculiarly callous and cynical in actions that subject the sick, the helpless, and the maimed to the additional hazard of fright, terror, darkness, and violence. It does not, somehow, seem to fit into the picture of the "social gains" of which we hear now and again and which we are given to understand must be protected at whatever cost.

The price seems to us to be too high, as, we are convinced, it will also appear to be to the great majority of American labor which is even now here and there rising in open revolt against the callous tyranny of a rascally leadership. We cannot believe that labor itself will permit, even if civil authorities seem to condone, such irresponsible acts as strikes against the public safety by a small section of its membership. We believe in the good common sense of the rank and file of American labor, who do not have to have us point out that everyone needs tranquil and secure hospitals. We trust that American labor, given the opportunity really to control its actions, will concede and enforce the principle that there is no right to strike against the public safety, any time, anywhere.

Editorial, *N. Y. St. J. Med.*, Nov. 1, 1941.

EDITORIAL

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W. EDWIN BIRD, M. D. ..... Editor
Du Pont Building, Wilmington, Del.
C. LEITH MUNSON, M. D. ..... Associate Editor
1015 Wash. St., Wilmington, Del.
M. A. TARUMIANZ, M. D. ..... Associate Editor & Bus. Mgr.
Du Pont Building, Wilmington, Del.
Telephone, Wilmington 3-4366

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THE DOCTOR A DUD?

The oft-repeated innuendo that the doctor, politically, is a dud is all bosh. We have always preached that the physician, once fully aroused on an issue, is an adversary to be reckoned with. True, the issue must be a worthy one, one which the doctor can advocate before his patients in the knowledge that, aside from any professional good that may accrue to him, it is something definitely and tangibly for the public good. Given such an issue, the doctor generally makes good. The latest proof of this is furnished by the recent election in Philadelphia where the profession was seriously concerned with the conduct of the office of Coroner.

According to the *Weekly Roster and Medical Digest,* Philadelphia, for November 1, 1941:

The importance of the elective office of Coroner to the citizens of Philadelphia led a committee of the College of Physicians of Philadelphia to address the following letter to each of the candidates in the coming election.

October 22, 1941.

"During the past year a committee of the College of Physicians of Philadelphia was appointed to survey the Coroner System in Pennsylvania and to compare its relative merits with the Medical Examiner System as practiced elsewhere. This committee is also vitally interested in the conduct of the Coroner's Office in Philadelphia and in means of improving it to the best interests of public welfare. For this reason the committee is directing the following questions to you. as candidate for the office, in the hope that you may find it possible to make some statement regarding future policy:

(1) Medical Advisory Board. Would you appoint such a board to aid in the conduct of the medical aspects of the office?

(2) Coroner's Physicians. Will you appoint recognized specialists in pathology (i.e., those listed as such by the American Medical Association) to these positions on a full-time basis?

(3) Deputy Coroners. What standards will you set for appointees to these positions, positions which require individuals who can survey medico-legal evidence intelligently, who must not be corruptible and who should cooperate fully with the medical profession?

(4) Laboratories. Will you develop adequate laboratory facilities for toxicology, bacteriology, histopathology, etc., to augment autopsy studies?

(5) Potter's Field. Will you insure that there is no possibility of collusion and/or fee-splitting between any employee of the Coroner's Office and undertakers or others concerning the burial of bodies consigned to Potter's Field, and will you agree to the disposal of such bodies at minimum cost to the County?

(6) Hospitals. Will you favor release of 'coroner's cases' to hospital pathologists for autopsy when there are no medico-legal implications and when permission for autopsy has been obtained from the family of the deceased by the hospital authorities?

(7) State Anatomical Board. Will you favor the transfer of unclaimed bodies to the State Anatomical Board, after the usual thirty-six hour custody, when there are no medico-legal implications, and will you permit the decision regarding autopsy on such bodies by hospital pathologists to rest with the State Anatomical Board?

This letter is being sent to both candidates for this office. We would appreciate an early reply, with your answers stated as specifically as possible.

Very truly yours,
COMMITTEE FOR THE INVESTIGATION OF THE CORONER SYSTEM.

Dr. Goddard has replied to this letter as follows:

October 23, 1941.

"It was a great satisfaction to me to receive your letter of October 22, 1941, because it shows a valuable study on this all important subject of the conduct of the office of Coroner in Phila-

delphia with the view of improving it for the best interests of public welfare. Your Committee is to be congratulated upon the results of its labors, presenting as it does my own concept of the duty of this high office.

By my reply to the following questions I wish you to understand that these answers are my policies if I am the successful candidate:

(1) Medical Advisory Board. Yes, such a Board will be appointed promptly and will consist of the best medical men.

(2) Coroner's Physicians. I will appoint recognized specialists in pathology after consultation with my medical board as far as is possible within the limits of my budget, with the ultimate aim that these positions will be filled on a full-time basis by these specialists.

(3) Deputy Coroners. I will appoint such individuals for these positions as can fulfill these requirements. They will be individuals who are not corruptible and will cooperate fully with the medical profession.

(4) Laboratories. I will work toward the end of developing these adequate laboratory facilities within the limit of the budget.

(5) Potter's Field. I will personally see to it that there shall be no collusion or fee-splitting between any employee of the Coroner's Office and undertaker or others concerning the burial of bodies consigned to Potter's Field, and shall see that such bodies are disposed of at a minimum cost to the county.

(6) Hospitals. I favor these releases as you have indicated in your question.

(7) State Anatomical Board. I favor providing the transfer of such unclaimed bodies to the State Anatomical Board as are not withheld by any medico-legal implications.

I have no objection to the appearance of the reference to the State Anatomical Board in the letter of the Committee for Investigation of the Coroner System.

It has been a pleasure indeed to have been able to answer these important questions by the fulfillment of which the Office of Coroner will be governed if I am the successful candidate."

Very truly yours,
HERBERT M. GODDARD, M. D.

Up to the time this material was sent to press no answer has been received from Mr. Hersch, the incumbent.

The morning after, when returns were complete, it was found that Dr. Goddard had defeated his opponent, Charles H. Hersch, the incumbent for the past eight years, by a majority of 11,000. The significance of this result is twofold: (1) the election generally was by no means a Republican landslide, Democrats being elected to many important posts, but the losing candidate ignored the reasonable request of the doctors for a reply to their questionnaire on this important medico-legal public office; and (2) Dr. Goddard's majority, except for the judgeships, was considerably in excess of that of the other winners. This excess came from the labors of the profession, many of whom cut their usual ticket to vote for Dr. Goddard, while others urged their patients to vote likewise.

The result speaks for itself—once more it is proven that, politically, the doctor is not a dud!

Urology Award

The American Urological Association offers an annual award "not to exceed $500.00" for an essay (or essays) on the result of some specific chemical or laboratory research in urology. The amount of the prize is based on the merits of the work presented, and if the committee on Scientific Research deem none of the offerings worthy, no award will be made. Competitors shall be limited to residents in urology in recognized hospitals, and to urologists who have been in such specific practice for not more than five years.

Essays shall be in the hands of the Secretary, Dr. Clyde L. Deming, 789 Howard avenue, New Haven, Conn., on or before April 1, 1942.

BOOK REVIEWS

Diseases of Women. By Harry S. Crossen, M. D., Professor Emeritus of Clinical Gynecology, Washington University, and Robert J. Crossen, M. D., Assistant Professor of Clinical Gynecology and Obstetrics, Washington University. 9th Edition. Pp. 948, with 1127 illustrations (45 in color). Cloth. Price, $12.50. St. Louis: C. V. Mosby Company, 1941.

This work first appeared in 1907, and so popular has it been that a new edition has appeared on an average of every four years. The present edition carries the Crossen work a step higher, and several steps further—many new subjects and 145 new illustrations, for gynecology is a fast-stepping science these days. The present book is as up-to-the-minute as any volume its size could be; it is unreasonable to expect the latest sulpha derivative to be mentioned, let alone clinically evaluated; we did expect, however, to find Karnaky's very plausible theory of menstruation to be mentioned.

To keep the material within reasonable bounds has necessitated considerable compression, too much so, we believe, in certain subjects, such as x-ray treatment of fibroids, which seems a bit sketchy. And for the more interested readers an index of authors is definitely needed; there is no connection between the names used in the text and those found in the excellent bibliography at the end of the book.

A word as to the illustrations. No gynecological textbook that we know of is more completely or more appropriately illustrated. The 45 plates in color, mostly from their own "Gyn. Lab.," are superb, and that goes also for the half dozen that were borrowed from the publications of two of our leading pharmaceutical manufacturers, a subtle compliment to the research these latter folks are conducting. Mosby has done himself proud in this department of the printing art.

Crossen is already so well liked that no praise of ours is necessary; we will say, however, that no one-volume text in the English language surpasses it, and that it will not be another six years before the inevitable 10th edition appears.

Rheumatic Fever in New Haven. Edited by John R. Paul, M. D., Professor of Preventive Medicine, Yale University. Pp. 176. Paper. Price, $1.00. Lancaster (Pa.): Science Press Printing Company, 1941.

This study is only the sixth of its kind that has been made anywhere. The other five stressed the statistical approach; this one follows more the clinical method. The work is of value to public health officials and to all clinicians, medical and surgical, who have to do with rheumatic fever.

The distributor for this book is the Milbank Memorial Fund, 40 Wall Street, New York City.

Immunity Against Animal Parasites. By James T. Culbertson, M. D., Assistant Professor of Bacteriology, Columbia University. Pp. 274. Cloth. Price, $3.50. New York: Columbia University Press, 1941.

The writer states in the preface that this book is intended for one who has been well trained in parasitology and immunology and wishes to become oriented in the field of immunity to parasites. This objective has apparently been accomplished, and the text contains a great deal of material condensed in an orderly manner in such a way that one can become acquainted with the literature covering any phase of the subject with a minimum of effort.

One commendable feature is that most of the statements are supported by experimental evidence. The chief value of the book is the extensive bibliography composed of about 1,300 references. The book is well bound and edited and will undoubtedly serve the purpose for which it is intended.

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1940. Pp. 181. Cloth. Price. $1.00. Chicago: American Medical Association, 1941.

This volume contains not only all of the published reports of the Council for the preceding year but also reports on products which were not deemed important enough to be published in *The Journal*. Council reports may be classified in general as those of omission or rejection, preliminary reports and status reports on drugs or on various therapeutic and pharmacologic problems. Representatives of all classes appear in this volume.

There are a number of interesting reports in the "non-acceptable" category. The one on the widely exploited Neurosine of the Dios Company sounds a timely warning on the hazards of bromidism and uncontrolled hypnotic medication. The report rejecting a number of preparations of gonadotropic hormone from the serum of pregnant mares, together with the report rejecting certain ovarian and ovarian anterior pituitary preparations, attest the Council's continued critical interest in the field of endocrinology. This is also indicated in the report on Desoxycorticosterone, written by Dr. Edgar S. Gordon and adopted by the Council for publication with a statement of the Council's attitude on the present status of adrenal cortex. The Council finds adrenal cortex therapy now in an unsatisfactory and unsettled state.

Two reports relegate to the therapeutic scrap heap the drugs Isacen and Melubrin: Isacen was accepted in 1926 as a non-toxic laxative or purgative; Melubrin is an antipyretic which seemed to have promise when it was accepted in 1913 but which the manufacturer has now ceased marketing. It is interesting to note that at the time these preparations were accepted the Council expressed some misgiving which later proved justified.

Noteworthy preliminary reports are on Guanidine Hydrochloride-Calco, which has been proposed for use in the treatment of myasthenia gravis, and Acetylglycarsenobenzene, a new antisyphilitic for intramuscular

use, which the Council feels should be further perfected. In its report the Council comments with approval upon the manner in which the Winthrop Chemical Company has developed the latter and studied it before even considering its commercial production.

Among the nomenclature reports are those designating "Pyridoxine" and "Pyridoxine Hydrochloride" for Vitamin B_6 and Vitamin B_6 Hydrochloride; "Sulfathiazole" for 2-Sulfanilamidothiazole, and "Sulfamethylthiazole" for 2-Sulfanilamido-4-Methylthiazole. Preliminary reports on these drugs, as well as on Phenothiazine and Histaminase, are included.

It is difficult to choose any among the so-called status reports for special mention—all are noteworthy for one reason or another. The report on the present status of the injection treatment of hernia is a continuation of the Council's consideration of this question. The Council has reached the decision that it is necessary to condemn the exploitation of the injection treatment of hernia by manufacturers of solutions.

Another status report that must be mentioned is that on Lipocaic, a new pancreatic hormone concerned in some way with the normal transport and utilization of fat. The Council awaits development of further clinical evidence for Lipocaic and expressed the opinion that the method should not be recognized for routine practice.

Mention must be made of the excellent report on organic mercurial compounds as bactericidal agents, which states the Council's conclusion that no organic mercurial compound has yet been offered that will guarantee the destruction of spores under all conditions.

Another valuable report is that on the promiscuous use of the barbiturates. This is a continuation of a previous study of the use of barbiturates in suicide. The present study is an analysis of hospital data.

One cannot even glance through a volume such as this without reflection on the great value of the Council on Pharmacy and Chemistry's work, which so richly deserves the support of all who are interested either directly or indirectly in the progress of medicine.

For the local Treatment of Acute Anterior **Urethritis**

(DUE TO NEISSERIA GONORRHEAE)

SILVER PICRATE*

*Silver Picrate, Wyeth, has a convincing record of effectiveness as a local treatment for acute anterior urethritis caused by Neisseria gonorrheae.[1] An aqueous solution (0.5 percent) of silver picrate or water-soluble jelly (0.5 percent) are employed in the treatment.

1. Knight, F., and Shelanski, H. A., "Treatment of Acute Anterior Urethritis with Silver Picrate," Am. J. Syph., Gon. & Ven. Dis., **23**, 201 (March), 1939.

A complete technique of treatment and literature will be sent upon request

*Silver Picrate is a definite crystalline compound of silver and picric acid. It is available in the form of crystals and soluble trituration for the preparation of solutions, suppositories, water-soluble jelly, and powder for vaginal insufflation.

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